

**REMARKS**

Claims 65-71 were pending in the subject application. In this amendment, Applicants have amended claims 65 and 68. Claims 65-71 are now pending in the subject application.

Claim 65 has been amended to specify that "an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5."

Claims 68 has been amended to specify that the "the aqueous solution comprising the pharmaceutical composition has a pH from about 3.5 to 4.5."

Support for the amendments to claim 65 and 68 can be found in the original specification at, for example, page 24, ¶ [0087].

No new matter is added by these amendments, and Applicants respectfully request their entry.

**I. Rejection of Claims 65-71 under 35 U.S.C. § 112, Second Paragraph**

The Examiner rejected claims 65-71 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. In particular, the Examiner asserts that "[i]t is unclear how a composition which is lyophilized can have a measurable pH."

Claim 65 has been amended to specify that "an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5." As noted above, the amendment to claim 65 is fully supported in the original specification. For example, the specification states that dissolution of the lyophilized composition in aqueous deionized water provides a solution having a pH of "above 3, and about 3.5 to 4.5" (see ¶ [0087], page 24). Applicants also note that addition of "5% dextrose, such as an amount contained in a drip bag for intravenous administration, raises the pH of the dalbavancin solution to about 5 to 5.5" (see *Id.*)

In view of the above, Applicants respectfully submit that pending claim 65 and claims 66-71 which depend directly or indirectly upon claim 65 are not indefinite, and request that the rejection of claims 65-71 under 35 U.S.C. § 112, second paragraph be withdrawn.

**II. Rejection of Claims 65-71 under 35 U.S.C. § 102(b)**

The Examiner rejected claims 65-71 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,750,509 to Malabarba et al. ("Malabarba"). The Examiner states that "Malabarba et al disclose composition comprising dalbavancin and a stabilizer (column 28, lines 9-12) and also disclose said composition in the form of a powder (column 28, line 13). Malabarba et al further disclose the combination of dalbavancin in combination with sugar, such as lactose (column 27, line 54-56)." The Examiner asserts that "[t]he claimed compositions are anticipated by Malabarba." Applicants respectfully traverse.

Malabarba relates to amide derivatives of antibiotic A 40926. Malabarba describes a genus of amide derivatives of antibiotic A 40926 and discloses 34 derivatives (see Table 1 in Malabarba). One of the disclosed compounds is dalbavancin (compound 11 in Table 1; see also Example 10, col. 32 in Malabarba). However, Malabarba does not disclose any composition containing an amide derivative having a MAG content in an amount of less than about 3 mole percent and at least one effective stabilizer, let alone a dry composition containing both dalbavancin and a surfactant, wherein

"an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5." In fact, Malabarba's disclosed method for making dalbavancin involves adjusting the pH of his reaction mixture to pH 7 prior to precipitation (see Example 10, col. 32).

"[R]ejections under 35 U.S.C. 102 are proper only when the claimed subject matter is identically disclosed or described in 'the prior art.'" *In re Arkley, Eardley, and Long*, 455 F.2d 586 (C.C.P.A. 1972). A prior art reference anticipates a claim if the reference discloses, either expressly or inherently, all the limitations of the claim. *EMI Group N. Am. v. Cypress Semiconductor*, 268 F.3d 1342, 1350 (Fed. Cir. 2001).

Amended claim 65 recites "a pharmaceutical composition comprising: dalbavancin containing MAG in an amount of less than about 3 mole percent; and at least one effective stabilizer; wherein the composition is lyophilized; and wherein dissolution of said composition in an amount of deionized water sufficient for solubilization provides a solution having a pH from about 3 to about 4.5." In contrast, Malabarba does not disclose either expressly or inherently any composition containing dalbavancin having a MAG content in an amount of less than about 3 mole percent and a surfactant, wherein "an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5" as recited in amended claim 65. Therefore, amended claim 65 and claims 66-71 which depend directly or indirectly upon amended claim 65 are not anticipated by Malabarba.

In view of the above, Applicants respectfully submit that pending claims 65-71 are not anticipated by Malabarba, and request that the rejection of these claims under 35 U.S.C. § 102(b) be withdrawn.

### **III. Rejection of Claims 65-71 under 35 U.S.C. § 103(a)**

The Examiner rejected claims 65-71 under 35 U.S.C. § 103(a) as allegedly being obvious over Malabarba for the reasons set forth in the office action. The Examiner also rejected claims 67-71 under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,774,104 to Sawai et al. ("Sawai") in combination with Malabarba for the reasons set forth in the office action. Applicants traverse these rejections for the reasons set forth below:

#### **A. Claims 65-71 are not obvious over Malabarba**

The Examiner states that "if there are any differences between the claimed composition and the prior art composition [of Malabarba], the differences would appear to be minor in nature and the claimed composition, which falls within the scope of the prior art's disclosure, would have been prima facie obvious from the said prior art's disclosure to a person having ordinary skill in the art at the time the claimed invention was made." Applicants respectfully traverse.

As noted above, Malabarba describes a broad genus of amide derivatives of antibiotic A 40926 and discloses 34 specific derivative (see Table 1). One of the disclosed compounds is dalbavancin (compound 11 in Table 1). However, nothing in Malabarba would lead one to select dalbavancin from the genus of described compounds and disclosed compounds. Nowhere does Malabarba teach or even suggest that dalbavancin is a preferred compound. Even if dalbavancin was selected, Malabarba does not teach or suggest any composition containing dalbavancin having a

MAG content in an amount of less than about 3 mole percent and at least one effective stabilizer as recited in amended claim 65.

Amended claim 65 also specifies that "an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5." Nothing in Malabarba teaches or suggests the influence of pH on the stability of dalbavancin-containing compositions. As noted above, Malabarba's disclosed method for making dalbavancin involves adjusting the pH of his reaction mixture to pH 7 prior to precipitation (see Example 10, col. 32).

In summary, Malabarba does not teach or suggest making or using any composition comprising dalbavancin and a surfactant; Malabarba does not teach or suggest using "dalbavancin containing MAG in an amount of less than about 3 mole percent;" and Malabarba does not teach or suggest that compositions containing any of his compounds (let alone dalbavancin) should have "a pH from above 3 to about 5."

"[A] proper analysis under § 103 requires inter alia a consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991). "[T]o have a reasonable expectation of success, one must be motivated to do more than merely vary all parameters or to try each of numerous possible choices until one possible arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful." *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006 (internal quotations omitted)).

As explained above, Malabarba does not teach or suggest making or using any dalbavancin composition, let alone a pharmaceutical composition comprising "dalbavancin containing MAG in an amount of less than about 3 mole percent; and at least one effective stabilizer; wherein the composition is lyophilized; and wherein an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5" as recited in amended claim 65 of the subject application. Therefore, amended claim 65 and claims 66-71 which depend directly or indirectly upon claim 65 are not obvious over Malabarba for at least this reason.

In view of the above, Applicants respectfully submit that pending claims 65-71 are not obvious over Malabarba, and request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

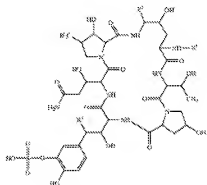
#### **B. Claims 65-71 are not obvious over Sawai in combination with Malabarba**

The Examiner states that "Sawai et al disclose stabilized lyophilized composition comprising a cyclic polypeptide and an effective stabilizer, wherein the composition has pH of 4.5-7.0 (column 9, lines 51-61). Sawai et al also disclose disaccharides as stabilizers (column 9, lines 9-15)." The Examiner concedes that "Sawai et al do not disclose the use of a cyclic polypeptide such as dalbavancin." Nevertheless, the Examiner contends that "since dalbavancin is a well known cyclic polypeptide as disclosed by Malabarba et al, a person having ordinary skill in the art at the time the

claimed invention was made would have been motivated to stabilize dalbavancin containing composition in accordance with the method disclosed by Sawai et al in order to provide stable dalbavancin-containing compositions." Applicants respectfully traverse.

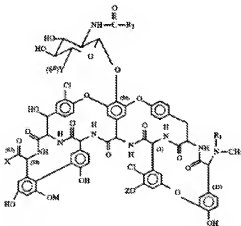
As discussed above, Malabarba provides no guidance to select dalbavancin and a stabilizer, and thereby arrive at a composition comprising dalbavancin and a surfactant "wherein an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5" as recited in amended claim 65 of the subject application. These deficiencies of Malabarba are not overcome further in combination with Sawai.

Sawai relates to lyophilized forms of pharmaceutical compositions comprising cyclic polypeptides having the structure:



Sawai's cyclic peptide

In contrast, the compounds described in Malabarba are of the formula:



Malabarba's derivatives of antibiotic A 40926 cyclic peptide

Applicants note that the backbone of Malabarba's derivatives of antibiotic A 40926 contain seven aryl groups, whereas Sawai's cyclic peptide contains no aryl groups in the backbone, and only one aryl group as a substituent. Another difference is that Malabarba's derivatives of antibiotic A 40926 contain no pentacyclic amines in the backbone of the backbone of the molecules, whereas

Sawai's cyclic peptide contains two pentacyclic amines. Yet another difference is that backbone of Malabarba's derivatives of antibiotic A contains three ether linkages, whereas Sawai's cyclic peptide contains none. Because the structures described by Malabarba and Sawai are so different, one of skill in the art would find no suggestion in Sawai to make a composition containing any of Malabarba's derivatives of antibiotic A 40926, let alone dalbavancin. Therefore, the combination of Malabarba and Sawai does not teach or suggest a composition containing dalbavancin and a stabilizer for at least this reason.

In summary, even if Sawai discloses lyophilized compositions having a pH of 4.5-7.0, nothing in Sawai would motivate one of skill in the art to select dalbavancin from the compounds described and disclosed by Malabarba, and thereby arrive at a "composition comprising: dalbavancin containing MAG in an amount of less than about 3 mole percent and a surfactant; and at least one effective stabilizer; ...wherein an aqueous solution comprising the pharmaceutical composition has a pH from above 3 to about 5" as recited in amended claim 65 of the subject application. Therefore, amended claim 65 and claims 66-71 which depend directly or indirectly upon amended claim 65 are not obvious over the combination of Sawai and Malabarba.

In view of the above, Applicants respectfully submit that pending claims 65-71 are not obvious over the combination of Sawai and Malabarba, and request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

#### CONCLUSION

Applicants respectfully request prompt consideration of the pending claims and early allowance of the application. No additional fee is believed due. However, if any fee is due, the Examiner is authorized to charge the fee to Applicants' Deposit Account No. 16-1445.

If the Examiner wishes to comment or discuss any aspect of this application or response, Applicants' undersigned attorney invites the Examiner to call him at the telephone number provided below.

Respectfully submitted,

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/David L. Kershner/  
David L. Kershner  
Attorney for Applicant  
Reg. No. 53,112

Pfizer Inc  
Patent Dept. – 5<sup>th</sup> Floor  
150 East 42<sup>nd</sup> Street  
New York, NY 10017-5612  
(212) 733-0538